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PATENT ABSTRACTS OF JAPAN

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(71) Applicant: MITSUBISHI ELECTRI

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(74) Representative:

(54) LASER BEAM **MACHINING METHOD**

(57) Abstract:

PURPOSE: To widen piercing hole diameter and to prevent burning by executing machining while driving vertically the focus position of the laser beam and rotating the laser beam or a machining material simultaneously with the start of the piercing.

CONSTITUTION: Simultaneously with the start of the piercing, the position of a machining lens is varied with the driving device of a motor, etc., and by ascending/lowering the focus position 3, the spot diameter of the laser beam on the surface of the machining material 2 is widened to widen the piercing hole diameter. Further, simultaneously with the start of the piercing, the laser beam 1 or the machining material 2 is made to circular movement to widen the piercing hole diameter. Then, the diameter of circular movement is necessary to make machining

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removal quantity with the piercing as little as possible and to shorten the time.

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